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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,014	09/11/2003	James Russell Boykin	AUS920030622US1	5891
35525	7590	09/24/2007		
IBM CORP (YA) C/O YEE & ASSOCIATES PC P.O. BOX 802333 DALLAS, TX 75380			EXAMINER MITCHELL, JASON D	
			ART UNIT	PAPER NUMBER
			2193	
			MAIL DATE	DELIVERY MODE
			09/24/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/660,014

Applicant(s)

BOYKIN ET AL.

Examiner

Jason Mitchell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 July 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Claims 2-22 are pending in this application.

***Response to Arguments***

2. **Applicant's arguments regarding the objection to figures 1-3 have been fully considered but they are not persuasive.**

While the specification states that the claimed system *may* be used with the systems shown in figures 1-3, the figures themselves do not actually show the claimed system only showing things which were known in the art. Accordingly the objection is maintained.

3. **Applicant's arguments, with respect to the objection to figure 4 have been fully considered and are persuasive. Consequently the objection has been withdrawn.**

4. **The replacement drawing sheet showing fig. 5A-5C are accepted and overcome the previous objection to those figures.**

5. **Applicant's amendments to claims 2 and 12 are sufficient to overcome the 35 USC 101 rejection to claims 2-21. Accordingly the rejections are withdrawn.**

**6. Applicant's arguments, with respect to the 35 USC 101 rejection to claim 22 have been fully considered but are not persuasive.**

The claim is drafted in such a way as to be directed, at least in part, to instructions in "transmission-type media, such as ... radio frequency and light wave transmissions".

Claims that recite the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in § 101.

***Drawings***

**7. Figures 1-3 and should be designated by a legend such as --Prior Art-- because only that which is old is illustrated.** See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 101***

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8. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. **Claims 2-6, 12-16 and 22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

10. **Claim 22 is not limited to tangible embodiments.**

Claim 22 not limited to statutory embodiments. In view of Applicant's disclosure, (see the paragraph bridging pp. 24 and 25) the claimed medium is not limited to statutory embodiments, instead being defined as including both statutory embodiments (e.g., e.g., "recordable-type media, such as a floppy disk") and non-statutory embodiments (e.g., "transmission-type media, such as ... radio frequency and light wave transmissions"). As such, the claim is not limited to statutory subject matter and is therefore non-statutory.

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. **Claims 2, 7-12 and 17-22 are rejected under 35 U.S.C. 103(a) as unpatentable over US 2004/0015936 to Susarla et al. (Susarla).**

13. **Regarding Claims 2, 12 and 22:** Susarla discloses a method for selecting a class loader for a plug-in, the method comprising:

generating a class loader hierarchy (Fig. 4) comprising a plurality of class loaders that includes two or more application class loaders, one for each of two or more application classes (par. [0101] "Each application may include an application class loader 202"), wherein each of said application class loaders can selectively load its application class, or delegate the loading of its application class to another class loader of said class loader hierarchy (par. [0017] "a delegation mechanism");

providing a plug-in class loader for each application class loader in the class loader hierarchy (Fig 4, Module Class Loader 204A), wherein each plug-in class loader delegates to its corresponding class loader (Fig. 4 Application Class Loader 202)

identifying the class loader of said hierarchy that is used to load a specified one of said two or more application classes (par. [0138] "The class loader controller may ... locate the appropriate class loader in the stack"); and

using the plug-in class loader that is provided for and delegates to said identified class loader to load a plug-in class that is associated with said specified application class (par. [0138] "The class loader controller may ... invoke the located class loader").

14. Susarla does not explicitly disclose providing a different plug-in class loader for each class loader in the hierarchy (specifically, the System Class Loader 200 of Fig. 4 is not shown as having a plug-in class loader).

15. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a different plug-in class loader (Fig. 4, Module Class Loader 204A) for each class loader in the Hierarchy (i.e. Fig. 4, System Class Loader 200) in order to provide 'dynamic class reloading' (see Abstract) at the system level as opposed to the application level (par. [0007] "The system class loader loads the standard classes and the application server core classes, and the application class loader loads the user-defined classes").

16. **Regarding Claims 7 and 17:** The rejections of claims 2 and 12 are incorporated, respectively; further Susarla discloses

identifying said plug-in class loader that is provided for and delegates to said identified class loader (par. [0141] "locate the class loader responsible for loading the class in the hierarchical stack of class loaders.").

17. **Regarding Claims 8 and 18:** The rejections of claims 2 and 12 are incorporated, respectively; further Susarla discloses:

responsive to a first application class loading a first plug-in class, identifying a target class loader within the class loader hierarchy that loaded a target class (par. [0141] "locate the class loader responsible for loading the class");

identifying a plug-in class loader that is provided for and delegates to the target class loader (par. [0141] "If there are one or more classes that depend on the class to

be reloaded, the class loaders responsible for reloading the dependent classes may be located and replaced as well"); and

loading the first plug-in class using the plug-in class loader (par. [0141] "the new class loader may load the changed classes").

**18. Regarding Claims 9 and 19:** The rejections of claims 8 and 18 are incorporated, respectively; further Susarla discloses the step of identifying a target class loader within the class loader hierarchy that loaded a target class includes using a class loader that loaded the application class to look up the target class (par. [0141] "If there are one or more classes that depend on the class to be reloaded, the class loaders responsible for reloading the dependent classes may be located and replaced as well").

**19. Regarding Claims 10 and 20:** The rejections of claims 8 and 20 are incorporated, respectively; further Susarla discloses

responsive to a second application class loading a second plug-in class, identifying the target class loader within the class loader hierarchy that loaded the target class (par. [0141] "locate the class loader responsible for loading the class");

identifying the plug-in class loader that is provided for and delegates to the target class loader (par. [0141] "If there are one or more classes that depend on the class to be reloaded, the class loaders responsible for reloading the dependent classes may be located and replaced as well"); and



loading the second plug-in class using the plug-in class loader (par. [0141] "the new class loader may load the changed classes").

20. Note the cited steps are intended to be repeated for each change and thus would occur at least twice.

21. **Regarding Claims 11 and 21:** The rejections of claims 10 and 20 are incorporated, respectively; further Susarla discloses the first plug-in class and the second plug-in class share data (par. [0159] "All the class paths may also be added to the application class loader").

22. **Claims 3-6 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2004/0015936 to Susarla et al. (Susarla) in view of Applicant admitted prior art (AAPA).**

**Regarding Claims 3-6 and 13-16:** Susarla does not explicitly disclose the plurality of class loaders including boot class, extension, system and one or more application class loaders.

AAPA teaches that the claimed boot class, extension, system and one or more application class loaders (see Fig. 5B 530, 520, 510, 502 and 504) were in common use at the time of the invention (pg. 17, 3<sup>rd</sup> para. "Figure 5B illustrates ... the common class loader hierarchy").

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings Susarla and AAPA to provide "Dynamic class reloading using a modular, pluggable and maintainable class loader" (Susarla Abstract; also see par. [0070] "the dynamic class reloading mechanism ... may be used with Java 2 Enterprise Edition (J2EE)").

### ***Conclusion***

23. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Mitchell whose telephone number is (571) 272-


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3728. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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